Shoptalk

A newsletter about dangerous waste and pollution prevention

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Links related to all articles can be found on the last pages.

Accommodation Requests:
To request ADA accommodation including materials in a format for the visually impaired, call Ecology at 360-407-6700. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

Inside:

2014 Dangerous Waste Annual Reports due March 1, 2015

If your site had an active RCRA Site ID Number in 2014, you must submit a 2014 Dangerous Waste Annual Report by March 1, 2015. Ecology mailed reminder notices in early January.

To get started now on your Annual Report, go to the TurboWaste website at https://fortress.wa.gov/ecy/turbowaste/Login/Splash.aspx and click on the orange "Enter TurboWaste" button.

For more information and important updates, check the Dangerous Waste Annual Report Website. If you have questions about designation, compliance issues, or generator status, please contact your regional Ecology office. If you have questions about your Uniform Hazardous Waste Manifest, please contact your waste service provider.

Time to Submit Tier Two Reports

The New Year is here, and many businesses are once again facing a variety of reports and deadlines in the approaching months. If your facility stores hazardous substances, it is time to review inventory records to see if you meet the reporting requirements for Tier Two—Emergency & Hazardous Chemical Inventory Reporting.

Is your facility required to report?

You must report if you had 10,000 pounds or more of any chemical or hazardous substance, such as gasoline or diesel, on site. The Emergency Planning and Community Right-to-Know Act (EPCRA) defines hazardous substances as chemicals present in the workplace that are capable of causing harm. Any product that requires a Material Safety Data Sheet (MSDS or SDS) is potentially reportable.

Tier Two information helps emergency responders know what chemicals might pose a risk during an emergency.

Chemicals classified as Extremely Hazardous Substances (EHS), such as ammonia and chlorine, are reportable at much lower thresholds – ammonia at 500 and chlorine at 100 pounds. These requirements apply to the maximum amount of a chemical or product on site at any one time during the previous calendar year.

How to report

The quickest and easiest way to report is Tier Two Online. This online reporting application allows you to:

- Easily upload previously submitted data.
- Quickly update your information.
- Submit directly to the SERC.
- Print and sign completed forms to send to your local agencies and for your records.

Visit the EPCRA website:

- To determine if your company needs to report by March 1, 2015. (Reports must be postmarked by March 1.)
- To register for Tier Two Online.
- For LEPC addresses to send your report.
- For more information on other EPCRA reporting requirements.

Why report?

The federal government created EPCRA, also known as SARA Title III. The Washington State Emergency Response Commission adopted the same reporting requirements. EPCRA Section 312 requires facilities that store hazardous substances to submit a Tier Two report each year to the State Emergency Response Commission (SERC), the Local Emergency Planning Committee (LEPC), and the local fire department.

EPCRA is an integral part of successful disaster prevention, preparedness, and response. These agencies use this information for pre-disaster and local emergency response planning. The Department of Ecology manages EPCRA reports on behalf of the SERC.

For EPCRA training, contact your Local Emergency Planning Committee. Ecology's Community Right-to-Know Specialists can also provide regulatory assistance and technical support. Contact us at epcra@ecy.wa.gov or call (800) 633-7585. Press "2" at the greeting to reach a Community Right-to-Know Specialist.

New Dangerous Waste Rules Effective January 18, 2015

Ecology approved a rule package to adopt new changes to the Dangerous Waste Rules, Washington Administrative Code (WAC) Chapter 173-303. This includes both federal and state level changes. The new rules were approved December 18, 2014 and go into effect January 18, 2015.

Federal Changes

New federal rules and updates include:

- Simplification of waste management at university and college laboratories.
- Changes to import/export rules.
- Corrections to hazardous waste regulations.
- A few other new, minor federal rules.

Washington State's Changes

Changes in Washington include:

- Establishing a thirty-day time limit for special waste held at solid waste transfer stations.
- Deleting a public disclosure rule that conflicts with state statute.
- Changes to existing financial assurance rules and proposing new rules for financial assurance at corrective action sites.
- Adopting a federal rule that allows use of enforceable documents in place of a post-closure permit.
- Clarifying rules about professional engineers certifying construction projects at permitted facilities.
- Clarifying test methods in Chemical Test Methods (publication #97-407).
- Technical corrections and clarifications.

During Ecology's public hearing and public comment period, we received and evaluated comments. View these comments and our responses here (publication #14-04-052).

Visit Ecology's Dangerous Waste Rules page for more information.

You can access more information about the new rule language and relevant documents here.

Continuing Education Opportunities Abound in 2015

If you're looking to expand your knowledge of safer chemistry, toxicology, or chemicals management, you will have some fantastic opportunities in 2015.

Green Chemistry and Chemical Stewardship Certificate Program

The University of Washington's Professional and Continuing Education program, in conjunction with UW Department of Environmental & Occupational Health Sciences, is developing a certificate program in Green Chemistry and Chemical Stewardship. The program plan includes three online classes that would take about nine months to complete.

The certificate is intended for product managers, health and safety professionals, chemists, and environmental and sustainability professionals interested in chemicals management.

Learn more at: www.pce.uw.edu/certificates/green-chemistry-chemical-stewardship.html and osha.washington.edu/professional-development/pages/distance-learning.

Best Practices for Transitioning to Safer Chemicals

The University of Washington Department of Environmental and Occupational Health Sciences (DOEHS) presents a one-day course, "Best Practices for Transitioning to Safer Chemicals," on January 29, 2015 at the Center for Urban Waters in Tacoma.

Students will participate in small-group workshops, explore real-world examples of transitioning to safer chemicals, and learn about best practices for facing the complexities and challenges of making these transitions. The course will cover:

- Substitution planning
- Alternatives assessments
- Chemical selection
- Tools to support these activities

Register at osha.washington.edu or by calling 206-543-1069.

Read more information on DOEHS's green chemistry and sustainability course offerings.

Design of Safer Chemicals and Products: The Nexus of Toxicology and Chemistry

Northwest Green Chemistry and the Molecular Design Research Network (MoDRN), will offer a two-day workshop on the design of safer chemicals and products, with an emphasis on toxicology, on April 23-24, 2015 in Portland, OR.

Chemists, toxicologists, and material scientists engaged in material selection and product design would benefit from this two-day course. Topics include systematic decision-making about design and selection of safer commercial chemicals and products. The most common tools used in chemical design and predictive toxicology will be explored in hands-on activities.

In addition to real world case studies, the workshop includes presentations on:

- Why toxicology matters
- How chemistry and toxicology connect
- Introduction to toxicology
- Chemical hazard and alternative assessments
- Rational chemical design
- Simulation tools
- Computational chemistry

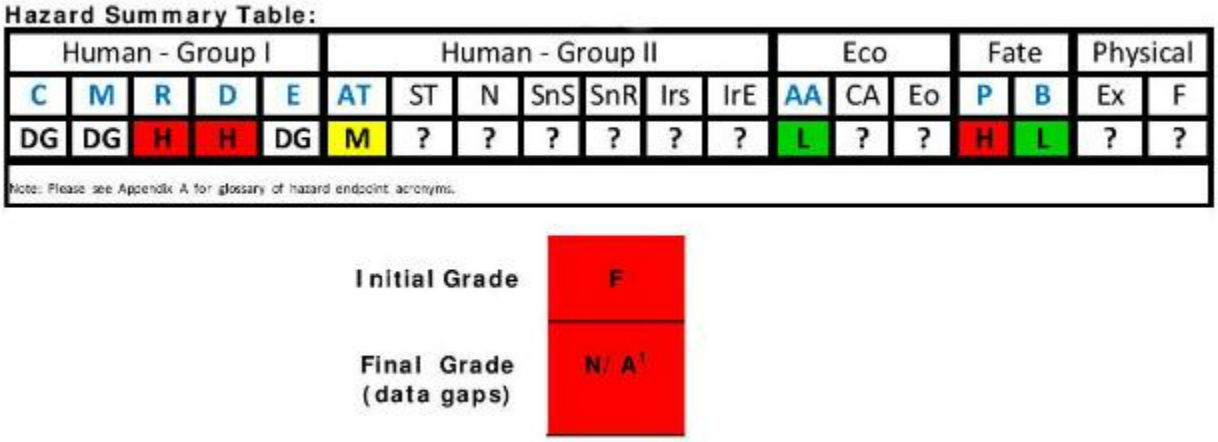
Register online: www.ngcworkshop.eventbrite.com

If you want to stay on top of future trainings, workshops, and conferences, bookmark the Green Chemistry Upcoming Events page.

Check out Ecology's green chemistry and safer chemical alternatives webinars.

Introduction to Chemical Hazard Assessment

The next "Introduction to Chemical Hazard Assessment" workshop will take place February 12 at the EPA offices at 1200 6th Avenue in Seattle. This highly rated class is free, and attendees will receive a certificate of completion. Please note that this class does not cover waste designation or other regulatory information.



What is chemical hazard assessment?
A chemical hazard assessment is a tool to help companies evaluate a chemical's impact on human health and the environment. Formulators, retailers, manufacturers, governments, and nonprofits use chemical hazard assessments. The assessments help them judge the safety of a chemical ingredient, or compare potential alternative ingredients against one another.

What does the class cover?
Dr. Alex Stone, Ecology chemist, leads this class. He gives an overview of the importance and approaches to evaluating chemicals on a level playing field. Participants will also learn to use the Quick Chemical Assessment

Tool (QCAT). The QCAT is a screening tool—ideal for smaller businesses or as a timesaving initial assessment. It's a simplified version of the GreenScreen® method of comparative chemical hazard assessment. Register at www.surveymonkey.com/s/QCAT021215, view a flyer, or email greenchemistry@ecy.wa.gov for more information.

Waste Reduction is a "Can-do" at Crown Beverage

Crown Beverage Packaging, Inc. makes nearly 5 million cans per day at its 144,000-square foot facility in Olympia for soda, beer, and other drinks. The company has 115 employees and operates 24 hours a day.

When Washington State implemented its pollution prevention planning law in the early 1990s, Crown qualified as a Large Quantity Generator of dangerous waste, producing 382,760 pounds of dangerous waste per year from sources such as oil mixed with water, solvents, and paint. In the years since, Crown has reduced its waste generation by 99.9 percent, generating just 412 pounds in 2013. That means Crown now qualifies as a Small Quantity Generator and no longer has to complete Pollution Prevention plans.

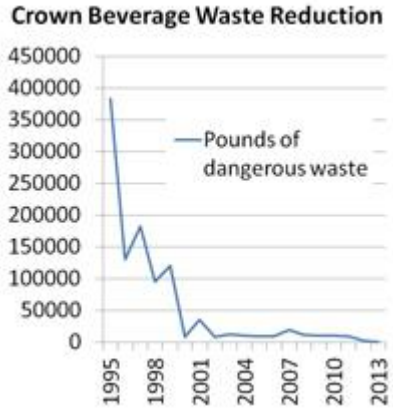
Tens of millions of empty soda and beer cans are stacked and ready for delivery at Crown's Olympia facility.

How They Did It

Crown started a string of small improvements that added up to those big changes. Some of these improvements included:

- Distilling the isopropyl alcohol used to clean its can printers, allowing the alcohol to be reused.
- Using different ink to reduce volatile organic compounds (VOCs).
- Installing high efficiency mats in an oven used to cure printed cans.
- Switching to an ultrasonic cleaner for air filters in place of using brake cleaner.

"We're trying to make our footprint as small as we can," said Mark Kirschenheiter, plant engineer for Crown's Lacey facility.



Employees in various parts of the company have suggested ideas for improvement. "That's what it takes to be successful – you have to be willing to listen," Kirschenheiter said. "It's not just one person in this plant that does pollution prevention. Everyone is on the team."

How Ecology Helped

Ecology's pollution prevention staff offered Crown several suggestions to reduce the facility's chemical use and initiated an energy audit. The audit was conducted by the Washington State University Extension Energy program and

the University of Washington Industrial Assessment program. Energy improvements inspired by the audit now save the company $113,300 a year.

All this efficiency has helped Crown cut its use of water by more than 2.5 million gallons a year and cut its greenhouse gas emissions by 604 tons a year.

And Crown hasn't stopped improving. Kirschenheiter plans to use water-based parts washers to clean machine parts in place of petroleum solvents and is considering replacing the facility's lights with energy-efficient LEDs.

Crown's 115 employees produce nearly five million beverage cans a day.

Five tips to reduce dangerous waste

1. Review waste designations to ensure you're not over- or under-designating.
2. Recycle solvents in-house or with a third party. Ask your waste hauler for recycling credits to reduce Hazardous Waste Planning Fees.
3. Identify toxic chemicals and find less toxic substitutes. Check out the list of upcoming classes in the previous article to learn how to do this.
4. Adjust operations to use less material and still get the job done.
5. Use water-based instead of petroleum-based cleaners.

To consult with Ecology's Pollution Prevention experts about reducing waste at your Washington business, contact your regional office.

Safer Chemistry Champion Awards

Trophies for the 2014 Safer Chemistry Champion award winners.

On October 28 Ecology honored five "Safer Chemistry Champions"—companies making significant improvements in safer products and cleaner manufacturing methods.

Award Winners

WaferTech LLC

This Camas-based company produces semiconductors, which are essential parts of most modern electronic devices. WaferTech reduced the amount of dangerous waste it creates by 94 percent over the past 10 years. They recycle more than 330 million gallons of water a year. WaferTech has also found ways to reuse chemicals such as sulfuric acid, phosphoric acid, and thinner waste, leaving less for disposal.

Redhook Ale Brewery

The popular Woodinville craft brewer replaced its steel bottling line with a plastic system. This reduced its use of water and a surfactant used as a lubricant. Redhook also cut its use of antimicrobial disinfectants and eliminated the need for chemical wastewater treatment.

Eco Chemical

Seattle-based specialty coatings manufacturer Eco Chemical makes water-based, low-VOC, nontoxic paints and coatings for the treated wood industry and athletic fields. Its TempLine artificial turf paint can be quickly and safely removed to allow venues like CenturyLink Field to switch between football and soccer with minimal risk.

Earth Friendly Products

This company's Lacey facility manufactures a range of cleaning and household products that are free of harmful chemicals like formaldehyde, phosphates, caustics, chlorine bleach, and other toxics. Earth Friendly Products' operations are carbon-neutral and the company has reduced its non-dangerous waste generation by 90 percent since 2010.

Floral Soil Solutions

This new Everett company developed a bio-based alternative to the familiar green petroleum-based foam florists use to hold flower arrangements. Floral Soil is made out of algae and coconut husks and is entirely compostable.

Ecology Director Maia Bellon (right) congratulates Pete Kegel and Mickey Blake of Floral Soil Solutions, one of the winners of the 2014 Safer Chemistry Champion Awards.

Award ceremony

The award ceremony took place at the Northwest Green Chemistry Roundtable in Tacoma (turn to page 11 for the story). Ecology Director Maia Bellon presented the awards, praising the winners' creativity and commitment.

"The Safer Chemistry Champion Awards celebrate businesses that are leading the way in safer products and cleaner manufacturing methods," Bellon said. "They demonstrate that reducing or eliminating toxic chemicals is both good for the environment and just good business."
Nominations for the awards are for accomplishments in green chemistry, hazardous materials reduction, or sustainability. The entries were judged on the nomination's innovation, leadership, and impact.

State Solid and Hazardous Waste Plan Update

The Department of Ecology (Ecology) is revising the Beyond Waste Plan. This is the state's plan for solid and dangerous waste, updated every five years. This time we are taking a broader look by incorporating the whole system—including where materials come from before they turn into waste.

We have adapted a materials management cycle graphic from the Oregon Department of Environmental Quality (DEQ) to show this. Looking at the full cycle can help identify more sustainable ways to design products that use less toxics and create less waste.

We need your input!

An essential part of the revision process is feedback from people like you, who are a part of the system at its various stages. Stakeholder meetings and survey input shaped our first draft. Many of you provided great feedback when our first draft went out for public comment in the summer of 2014. Read a summary of these comments on our waste plan update website.

The second draft is now available, and we need to hear from you again. Please sign up for the listserv so we can notify you of future public input opportunities.

Contact us if you have questions about the state plan update:

- Chris Chapman, Hazardous Waste & Toxics Reduction Program, 360-407-7160, chris.chapman@ecy.wa.gov
- Janine Bogar, Waste 2 Resources Program (solid waste), 360-407-6654, janine.bogar@ecy.wa.gov

Ecology's Hazardous Waste Services Directory Goes Offline

The Hazardous Waste Services Directory is no longer available. Our online directory helped facilities find service providers for managing, transporting, and disposing of their dangerous waste. But when the budget was cut in 2012, the content became outdated and the database stopped working properly.

The directory closed in November and will not be available while we explore options to bring it up to date. In the meantime, we found three other directories to help you find waste vendors:

- Local Hazardous Waste Management Program in King County "Yellow Book" Waste Directory
- Spokane EnviroStars Waste Directory
- Environmental Services Directory for Washington State

Ecology does not endorse any business listed in any of the directories. We provide this information as a resource, but you are always responsible for ensuring your dangerous waste is managed properly.

Any major updates to the directory will be announced in *Shoptalk*—stay tuned!

Choose Your Service Providers Carefully

Visit our original directory page to find these directory links along with information about choosing a service provider. If you use a service provider that does not manage your waste properly, you are responsible for the legal consequences, which could include the high cost of cleaning up contamination.

Questions?

Contact Erin Jeffries at erin.jeffries@ecy.wa.gov with questions about the Hazardous Waste Services Directory project.

Northwest Green Chemistry Roundtable

Northwest Green Chemistry Roundtable keynote speaker Paul Anastas talks about how innovation can help solve the problems we face from toxic chemicals.

On October 28, industry professionals and green chemistry advocates came together to discuss research, innovation, and strategies for reducing toxics in Puget Sound at the Northwest Green Chemistry Roundtable in Tacoma.

The event, whose theme was "Catalyzing Change," brought together leaders in chemistry, chemicals management, toxicology, occupational health, and sustainability for a one-day roundtable.

Paul Anastas, director of Yale's Center for Green Chemistry and Green Engineering, gave the keynote speech. Considered one of the "fathers" of green chemistry, Anastas praised the work of Pacific Northwest businesses who are advancing green chemistry and creating safer products.

"What you're doing here is tremendously important," he told the audience. "It's redesigning the basis of our society and our economy to be more sustainable than the frankly tragic trajectory we are on."

Panel discussions at the roundtable explored issues including:

- Toxics in Puget Sound and how new technology in areas like copper-free vehicle brakes and permeable concrete are tackling these problems.
- How material health considerations in product design can drive green chemistry innovation.
- Updates on green chemistry work being done at university research centers around the Northwest.
- Examples of bio-based source materials resulting in safer products and manufacturing processes.

A demonstration of permeable concrete at the Northwest Green Chemistry Roundtable, which allows stormwater to pass through pavement and helps to capture heavy metals such as copper and zinc.

Ecology Director Maia Bellon presented the Safer Chemistry Champion Awards (see page 8 for the full story) to five Northwest companies leading the way on creating safer products and cleaner manufacturing processes. Bellon spoke about the central role innovation can play in solving the challenges we face in dealing with toxic chemicals.

Links to Resources Mentioned in this Issue

Dangerous Waste Annual Reports due March 1

- **RCRA Site ID Number:** http://www.ecy.wa.gov/programs/hwtr/waste-report/notification.html
- **TurboWaste:** https://fortress.wa.gov/ecy/turbowaste/Login/Splash.aspx
- **Dangerous Waste Annual Report website:** http://www.ecy.wa.gov/programs/hwtr/waste-report/index.html
- **Regional Ecology offices:** http://www.ecy.wa.gov/programs/hwtr/waste-report/contacts.html

Time to Submit Tier Two Reports

- **Tier Two Online:** http://www.ecy.wa.gov/epcra/tiertwo.html
- **EPCRA Website:** http://www.ecy.wa.gov/epcra/index.html

New Dangerous Waste Rules Effective January 18

- **Chemical Test Methods (Ecology publication #97-407):** https://fortress.wa.gov/ecy/publications/summarypages/97407.html
- **Summary of rule making and response to comments for 2014 dangerous waste rule amendments:** https://fortress.wa.gov/ecy/publications/SummaryPages/1404052.html
- **Dangerous Waste Rules page:** http://www.ecy.wa.gov/programs/hwtr/laws_rules/DWRuleMaking.html
- **Rule Language and relevant documents:** http://www.ecy.wa.gov/laws-rules/wac173303/1307.html

Continuing Education Opportunities Abound in 2015

- **Green Chemistry:** http://www.nwgreenchemistry.org/
- **UW Certificate Program:** http://www.pce.uw.edu/certificates/green-chemistry-chemical-stewardship.html
- **OSHA Distance Learning:** https://osha.washington.edu/professional-development/pages/distance-learning
- **UW OSHA Continuing Education:** https://osha.washington.edu/
- **DOEHS's green chemistry and sustainability courses:** https://osha.washington.edu/professional-development/pages/research-practice-projects
- **Molecular Design Research Network:** http://modrn.yale.edu/
- **Northwest Green Chemistry workshop registration:** http://www.ngcworkshop.eventbrite.com/
- **Green Chemistry upcoming events page:** http://www.ecy.wa.gov/programs/hwtr/p2/GreenChem/events.html
- **Green Chemistry and safer chemical alternatives webinars:** http://www.ecy.wa.gov/programs/hwtr/p2/GreenChem/Greenchem_resources.html#Recorded_Webinars
- **Introduction to Chemical Hazard Assessment workshop registration:** https://www.surveymonkey.com/s/QCAT021215
- **Quick Chemical Assessment Tool (QCAT):** http://www.ecy.wa.gov/programs/hwtr/ChemAlternatives/QCAT.html
- **GreenScreen®:** http://greenscreenchemicals.org/
- **QCAT flyer:** http://www.ecy.wa.gov/programs/hwtr/p2/GreenChem/pdfs/QCATflier.pdf

Waste Reduction is a "Can-do" at Crown Beverage

- **Ecology regional offices:** http://www.ecy.wa.gov/org.html

Safer Chemistry Champions Awards

- **WaferTech LLC:** http://www.wafertech.com/en/index.html
- **Redhook Ale Brewery:** http://redhook.com/
- **Eco Chemical:** http://eco-templine.com/
- **Earth Friendly Products:** http://www.ecos.com/
- **Floral Soil Solutions:** http://www.floralsoilsolutions.com/

State Solid and Hazardous Waste Plan Update

- **Beyond Waste Plan:** http://www.ecy.wa.gov/beyondwaste/
- **Waste plan update site:** http://www.ecy.wa.gov/wasteplan/
- **Waste plan Listserv subscription:** http://listserv.wa.gov/cgi-bin/wa?SUBED1=WA-STATE-WASTE-PLAN&A=1

Ecology's Hazardous Waste Services Directory Goes Offline

- **Hazardous Waste Service Directory:** http://www.ecy.wa.gov/programs/hwtr/hwsd/index.html
- **"Yellow Book" Waste Directory:** http://www.lhwmp.org/home/Yellowbook/index.aspx
- **Spokane Envirostars Waste Directory:** http://www.spokanewastedirectory.org/
- **Environmental Services Directory:** http://www.esdwa.com/services/index.cfm